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Current Status of Spaceborne Imaging Spectrometer Design to Match AVIRIS Performance"

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Abstract

In this paper we present a system design that comes closest to achieving AVIRIS-type performance from a spaceborne pushbroom system. We briefly discuss the trades that have led us to the particular design form, as well as the expected performance. The system uses two spectrometer modules, each of which carries separate VNIR and SWIR focal planes. This permits good spectral registration between the two FPA mays and reduces the demands on the front telescope. We also present results from a breadboard spectrometer module that was assembled with only one degree of fkeedom and yet achieved excellent performance in terms of smile and keystone. This confirms that high-performance pushbroom spectrometers are possible to fabricate without excessive effort or cost.